AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An image data generation apparatus comprising:

reception means for receiving a parameter for displaying three-dimensional image data, said parameter including information data indicating ~~a camera arrangement~~ one of a plurality of predetermined camera arrangements of a plurality of cameras which ~~that~~ has picked up said three-dimensional image data, said one of a plurality of camera arrangements describing a placement of said plurality of cameras relative to each other during image pickup, and at least one of information data indicating a method of generating three-dimensional image data from data of the picked up image and information data for controlling presentation of said three-dimensional image data;

three-dimensional image display control information generation means for generating three-dimensional image display control information by encoding said parameter; and

file generation means for generating a multimedia information file based on both of said three-dimensional image display control information and said three-dimensional image data, or at least two-dimensional image data, wherein header control information is added thereto.

2. (Original) The image data generation apparatus according to claim 1, further comprising recording means for recording said multimedia information file.

3. (Original) The image data generation apparatus according to claim 1, wherein

said file generation means outputs said multimedia information file to an external communication path.

4. (Previously presented) The image data generation apparatus according to claim 1,

wherein said three-dimensional image display control information includes at least one of first information indicating a number of viewpoints of said three-dimensional image data, second information indicating from which viewpoint position said three-dimensional image data is

obtained, third information indicating a direction of sub-sampling of said three-dimensional image data, fourth information indicating a maximum shift amount when a parallax image of said three-dimensional image data is shifted, fifth information indicating whether a border is to be displayed around an image of said three-dimensional image data, sixth information indicating border image data to be displayed around the image of said three-dimensional image data, and three-dimension identification information indicating that said multimedia information file contains the three-dimensional image data.

5. (Canceled)

6. (Previously presented) The image data generation apparatus according to claim 1,

wherein said file generation means indicate a file type by providing a different extension to said multimedia information file when said multimedia information file contains three-dimensional image data and when said multimedia information file does not contain three-dimensional image data.

7. (Previously presented) The image data generation apparatus according to claim 6,

wherein when said extension indicates that said multimedia information file contains three-dimensional images data, said extension further indicates which of said plurality of different three-dimensional display methods, each display method being different from the other, is used to display said three-dimensional image data.

8-9. (Canceled)

10. (Previously presented) An image data generation apparatus, comprising:

a file generation unit for generating a multimedia information file including both of image pick-up condition information indicating an image pick-up condition for a three-dimensional image and three-dimensional image data, or at least two-dimensional image data, wherein header control information is added thereto, and

wherein said both of image pick-up condition and three-dimensional image data, or at least two-dimensional image data are encoded in a parameter that is stored in said multimedia file, and

wherein said image pick-up condition information includes at least one of information indicating a number of parallaxes in a horizontal direction and information indicating a number of parallaxes in a direction perpendicular thereto.

11. (Currently Amended) An image data generation apparatus, comprising:

a file generation unit for generating a multimedia information file including both of image pick-up condition information indicating an image pick-up condition for a three-dimensional image and three-dimensional image data, or at least two-dimensional image data, wherein header control information is added thereto,

wherein said both of image pick-up condition and three-dimensional image data, or at least two-dimensional image data are encoded in a parameter that is stored in said multimedia file, and

wherein said image pick-up condition information includes at least one of information indicating one of a plurality of predetermined camera arrangement shapes formed by a plurality of cameras which has picked up said three-dimensional image data~~a camera arrangement shape~~, information indicating an interval between adjacent cameras of the plurality of cameras which has picked up said three-dimensional image data, and information indicating a distance from a camera arrangement plane formed by the plurality of cameras which has picked up said three-dimensional image data to a convergence point formed by the view axes of said plurality of cameras.

12. (Currently Amended) An image data reproduction apparatus comprising:

reception means for receiving a multimedia information file including both of three-dimensional image display control information generated by encoding a parameter for displaying three-dimensional image data and said three-dimensional image data, or at least two-dimensional image data,

wherein said parameter includes information data indicating one of a plurality of predetermined camera arrangements of a plurality of cameras which ~~a camera arrangement that~~ has picked up said three-dimensional image data, said one of a plurality of camera arrangements describing a placement of said plurality of cameras relative to each other during image pickup, and at least one of information data indicating a method of generating three-dimensional image data from data of the picked up image and information data for controlling presentation of the said three-dimensional image data;

wherein header control information has been added to said multimedia information file;

file structure analysis means for analyzing a structure of said multimedia information file so as to extract the three-dimensional image display control information, the header control information and said three-dimensional image data or said two-dimensional image data;

three-dimensional image display control information analysis means for analyzing said three-dimensional image display control information extracted by said file structure analysis means;

data reproduction means for reproducing said three-dimensional image data extracted by said file structure analysis, based on the header control information extracted by said file structure analysis means; and

data conversion means for converting said reproduced three-dimensional image data, such that said three-dimensional image data can be presented in a display unit, based on a result of analysis by said three-dimensional image display control information analysis means.

13. (Previously presented) The image data reproduction apparatus according to claim 12,

wherein said three-dimensional image display control information includes at least one of first information indicating a number of viewpoints of said three-dimensional image data, second information indicating from which viewpoint position said three-dimensional image data is obtained, third information indicating a direction of sub-sampling of said three-dimensional image data, fourth information indicating a maximum shift amount when a parallax image of said three-dimensional image data is shifted, fifth information indicating whether a border is to be displayed around an image of said three-dimensional image data, sixth information indicating

border image data to be displayed around the image of said three-dimensional image data, and three-dimension identification information indicating that said multimedia information file contains the three-dimensional image data.

14. (Previously presented) The image data reproduction apparatus according to claim 12 or 13, further comprising file type determination means for analyzing a structure of said multimedia information file so as to determine whether said multimedia information file includes at least one of three-dimensional image display control information and three-dimensional image data.

15. (Previously presented) The image data reproduction apparatus according to claim 12 or 13, further comprising file type determination means for analyzing a structure of said multimedia information file so as to determine whether three-dimension identification information is included in said multimedia file and for further determining at least one of whether said multimedia information file includes said three-dimensional image data and on which three-dimensional display scheme said three-dimensional image data is based.

16. (Currently Amended) An image data reproduction apparatus, comprising:

reception means for receiving a multimedia information file including three-dimensional image display control information obtained by encoding a parameter for displaying three-dimensional image data and said three-dimensional image data, or two-dimensional image data, said parameter including information data indicating ~~a camera arrangement that has~~one of a plurality of camera arrangements of a plurality of cameras which has picked up said three-dimensional image data, said one of a plurality of camera arrangements describing a placement of said plurality of cameras relative to each other during image pickup, and at least one of information data indicating a method of generating three-dimensional image data from data of the picked up image and information data for controlling presentation of said three-dimensional image data; and

file type determination means for analyzing an extension of said multimedia information file wherein said file type determination means determine, based on the analysis of said extension, at least one of whether said multimedia information file includes said three-dimensional image data and on which of a plurality of three dimensional display ~~scheme~~ schemes said three-dimensional image data is based.

17. (Previously presented) The image data reproduction apparatus according to claim 16, wherein

said three-dimensional image display control information includes at least one of first information indicating a number of viewpoints of said three-dimensional image data, second information indicating from which viewpoint position said three-dimensional image data is obtained, third information indicating a direction of sub-sampling of said three-dimensional image data, fourth information indicating a maximum shift amount when a parallax image of said three-dimensional image data is shifted, fifth information indicating whether a border is to be displayed around an image of said three-dimensional image data, sixth information indicating border image data to be displayed around the image of said three-dimensional image data, and three-dimension identification information indicating that said multimedia information file contains the three-dimensional image data.

18. (Previously presented) An image data reproduction method, comprising:
generating a multimedia information file including both of image pick-up condition information indicating an image pick-up condition for a three-dimensional image and three-dimensional image data, or at least two-dimensional image data, wherein

said both of image pick-up condition and three-dimensional image data, or at least two-dimensional image data are encoded in a parameter that is stored in said multimedia file, and wherein

said image pick-up condition information includes at least one of information indicating a number of parallaxes in a horizontal direction and information indicating a number of parallaxes in a direction perpendicular thereto;

reproducing said three-dimensional image based on the image pick-up condition information indicating an image pick-up condition for a three-dimensional image and three-dimensional image data, or at least two-dimensional image data encoded in said parameter that is stored in said multimedia file.

19. (Currently Amended) An image data reproduction method, comprising:

generating a multimedia information file including both of image pick-up condition information indicating an image pick-up condition for a three-dimensional image and three-dimensional image data, or at least two-dimensional image data, wherein

said both of image pick-up condition and three-dimensional image data, or at least two-dimensional image data are encoded in a parameter that is stored in said multimedia file, and wherein

said image pick-up condition information includes at least one of information indicating one of a plurality of predetermined camera arrangement shapes formed by a plurality of cameras which has picked up said three-dimensional image data~~a camera arrangement shape~~, information indicating an interval between adjacent cameras of the plurality of cameras which has picked up said three-dimensional image data, and information indicating a distance from a camera arrangement plane formed by the plurality of cameras which has picked up said three-dimensional image data to a convergence point formed by the view axes of said plurality of cameras;

reproducing said three-dimensional image based on the image pick-up condition information indicating an image pick-up condition for a three-dimensional image and three-dimensional image data, or at least two-dimensional image data encoded in said parameter that is stored in said multimedia file.

20. (Currently Amended) An image data recording medium, having stored thereon information representing a multimedia information file, the information when executed on an image data reproduction apparatus depicting information including both of three-dimensional image display control information generated by encoding a parameter for displaying three-

dimensional image data and said three-dimensional image data, or at least two-dimensional image data, wherein

header control information is added to said multimedia information file, and

wherein said parameter includes information data indicating ~~a camera arrangement that has~~ one of a plurality of predetermined camera arrangements of a plurality of cameras which has picked up said three-dimensional image data, said camera arrangement describing a placement of said plurality of cameras relative to each other during image pickup, and at least one of information data indicating a method of generating three-dimensional image data from data of the picked up image and information data for controlling presentation of the said three-dimensional image data~~, and~~.

21. (Previously presented) The image data recording medium according to claim 20, wherein the information when executed, further depicting said three-dimensional image display control information to include at least one of first information indicating a number of viewpoints of said three-dimensional image data, second information indicating from which viewpoint position said three-dimensional image data is obtained, third information indicating a direction of sub-sampling of said three-dimensional image data, fourth information indicating a maximum shift amount when a parallax image of said three-dimensional image data is shifted, fifth information indicating whether a border is to be displayed around an image of said three-dimensional image data, sixth information indicating border image data to be displayed around the image of said three-dimensional image data, and three-dimension identification information indicating that said multimedia information file contains the three-dimensional image data.

22. (Canceled)

23. (Previously presented) The image data recording medium according to claim 20 or 21, wherein the information when executed, further depicting said multimedia information file, with a different extension when said multimedia information file contains three-dimensional

image data than when said multimedia information file does not contain three-dimensional image data.

24. (Previously presented) The image data recording medium according to claim 23, wherein the information when executed, further depicting said extension to further indicate which of a plurality of different three-dimensional display methods, each display method being different from the other, is used to display said three-dimensional image data.

25. (Currently Amended) An image data recording medium, having stored thereon information representing a multimedia information file, the information when executed on an image data reproduction apparatus depicting information including both of image pick-up condition information indicating an image pick-up condition for a three-dimensional image and three-dimensional image data, or at least two-dimensional image data, ~~wherein~~

wherein said both of image pick-up condition and three-dimensional image data, or at least two-dimensional image data are encoded in a parameter that is stored in said multimedia file, and wherein

said image pick-up condition information includes at least one of information indicating a number of parallaxes in a horizontal direction and information indicating a number of parallaxes in a direction perpendicular thereto.

26. (Currently Amended) An image data recording medium, having stored thereon information representing a multimedia information file, the information when executed on an image data reproduction apparatus depicting information including both of image pick-up condition information indicating an image pick-up condition for a three-dimensional image and three-dimensional image data, or at least two-dimensional image data, ~~wherein~~

wherein said both of image pick-up condition and three-dimensional image data, or at least two-dimensional image data are encoded in a parameter that is stored in said multimedia file, and wherein

said image pick-up condition information includes at least one of information indicating one of a plurality of predetermined camera arrangement shapes formed by a plurality of cameras which has picked up said three-dimensional image data ~~a camera arrangement shape~~, information indicating an interval between adjacent cameras of the plurality of cameras which has picked up said three-dimensional image data, and information indicating a distance from a camera arrangement plane formed by the plurality of cameras which has picked up said three-dimensional image data to a convergence point formed by the view axes of said plurality of cameras.

27-32. (Canceled)

33. (Currently Amended) An image data recording medium, having stored thereon in a recording area, information representing a multimedia information file, the information when executed on an image data reproduction apparatus depicting information including both three dimensional image display control information generated by encoding a parameter for displaying three-dimensional image data and said three-dimensional image data, or at least two-dimensional image data, wherein

wherein said parameter includes information data indicating one of a plurality of predetermined camera arrangements of a plurality of cameras which has ~~a camera arrangement that has~~ picked up said three-dimensional image data, said one of a plurality of camera arrangements describing a placement of said plurality of cameras relative to each other during image pickup, and at least one of information data indicating a method of generating three-dimensional image data from data of the picked up image and information data for controlling presentation of the said three-dimensional image data, and wherein

said recording area further includes an image recording area for recording said three-dimensional image data or the two-dimensional image data, an audio recording area for recording audio data, and a sub code area for recording associated information including a time code.

34. (Previously presented) The image data recording medium according to claim 33, the information when executed further depicting recording of at least a portion of said three-dimensional image display control information in said image recording area.

35. (Previously presented) The image data recording medium according to claim 33, the information when executed further depicting recording of at least a portion of said three-dimensional image display control information in said audio recording area.

36. (Previously presented) The image data recording medium according to claim 33 , the information when executed further depicting recording of at least a portion of said three-dimensional image display control information in said sub code area.

37. (New) The image data generation apparatus of claim 1, wherein the information data indicating one of a plurality of camera arrangements describes at least one of a positional, angular, and spatial relation between the plurality of cameras that has picked up said three-dimensional image data.

38. (New) The image data generation apparatus of claim 1, wherein the information data indicating one of a plurality of camera arrangements is one of a linear arrangement, an annular arrangement, a planar arrangement, a spherical arrangement, and a lattice arrangement.

39. (New) The image data reproduction apparatus of claim 12, wherein the information data indicating one of a plurality of camera arrangements describes at least one of a positional, angular, and spatial relation between the plurality of cameras that has picked up said three-dimensional image data.

40. (New) The image data reproduction apparatus of claim 12, wherein the information data indicating one of a plurality of camera arrangements is one of a linear arrangement, an annular arrangement, a planar arrangement, a spherical arrangement, and a lattice arrangement.

41. (New) The image data reproduction apparatus of claim 16, wherein the information data indicating one of a plurality of camera arrangements describes at least one of a positional, angular, and spatial relation between the plurality of cameras that has picked up said three-dimensional image data.

42. (New) The image data reproduction apparatus of claim 16, wherein the information data indicating one of a plurality of camera arrangements is one of a linear arrangement, an annular arrangement, a planar arrangement, a spherical arrangement, and a lattice arrangement.

43. (New) The image data recording medium of claim 20, wherein the information data indicating one of a plurality of camera arrangements describes at least one of a positional, angular, and spatial relation between the plurality of cameras that has picked up said three-dimensional image data.

44. (New) The image data recording medium of claim 20, wherein the information data indicating one of a plurality of camera arrangements is one of a linear arrangement, an annular arrangement, a planar arrangement, a spherical arrangement, and a lattice arrangement.

45. (New) The image data recording medium of claim 33, wherein the information data indicating one of a plurality of camera arrangements describes at least one of a positional, angular, and spatial relation between the plurality of cameras that has picked up said three-dimensional image data.

46. (New) The image data recording medium of claim 33, wherein the information data indicating one of a plurality of camera arrangements is one of a linear arrangement, an annular arrangement, a planar arrangement, a spherical arrangement, and a lattice arrangement.